Filing Receipt

Received - 2022-03-21 02:21:03 PM
Control Number - 52373
ItemNumber - 354

PROJECT NO. 52373

REVIEW OF WHOLESALE MARKET DESIGN	**§**	**PUBLIC UTILITY COMMISSION OF TEXAS**

TEXAS PUBLIC POLICY FOUNDATION'S COMMENTS ON SOUTH TEXAS ELECTRIC COOPERATIVE MARKET REFORM PROPOSAL

TO THE HONORABLE PUBLIC UTILITY COMMISSION OF TEXAS:

The Texas Public Policy Foundation (TPPF), through its Life:Powered initiative, respectfully submits the following comments in response to the market redesign concepts submitted by the South Texas Electric Cooperative (STEC) on March 11[1].

TPPF strongly recommends that the Public Utility Commission (PUC or Commission) follow STEC's request to add this proposal to the current Request for Proposals (RFP) because it addresses the most important factor that is not addressed in any of the Commission's current Phase II proposals, namely, cost allocation. As TPPF has noted in previous comments on the Phase II proposals[2], any firming requirement that assigns costs entirely to load will ultimately fail to achieve the Commission's goals of bringing greater balance and reliability to the ERCOT market while minimizing costs to ratepayers. These comments will outline the importance of this aspect of STEC's proposal along with a couple of other important elements.

Cost Allocation

Historically, the costs for ancillary services and reserve power in the ERCOT market have been assigned to loads. Since ratepayers receive the benefits of additional reliability and assigning the costs to ratepayers reduces the costs and risks for generators to operate, thereby assisting the maintenance and growth of generation, it is optimal in terms of economics and reliability for load to pay for these services. However, with the explosion of subsidized variable generation in the ERCOT market, this assumption is no longer valid. Because no reliability requirements are imposed on those generators upon entering the ERCOT market, they decrease the reliability of the grid as they displace more dispatchable generation.

Allowing the reliability of the grid to degrade, as it has over the past decade, is no longer feasible. Therefore, only two options remain. The first is to assign some reliability and firming costs to those generators so that their entrance into the market does not degrade the reliability of the system. The second is to assign those costs to load, which will fail to impose discipline on the growth of variable

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[1] South Texas Electric Cooperative, Inc, "Reliability Service Proposal of South Texas Electric Cooperative, Inc, Project No. 52373," March 11, 2022, https://interchange.puc.texas.gov/Documents/52373_350_1193554.PDF.
[2] Texas Public Policy Foundation, "Comments on Phase II Market Redesign Proposals, Project No. 52373," December 10, 2021, https://interchange.puc.texas.gov/Documents/52373_313_1173157.PDF.

generation and lead to increasingly expensive regulatory interventions to support dispatchable generation as subsidized variable generation grows unchecked. Under this cost allocation method, which is the foundation of all three of the existing Phase II proposals, the market will eventually devolve into an energy market dominated by variable generation and a dispatchable capacity market determined by regulatory fiat.

STEC's proposal correctly identifies this cost allocation problem and applies a solution that is consistent with the cost-causation principle in SB 3 Section 14[3]. Since the cost of the reliability service is spread across all market participants—thermal generators, renewable generators, and load—everyone is incentivized to support firming and reliability and penalized for not doing so. Dispatchable generators, which are receiving revenues from the service, would pay for failing to meet their obligations. Metered load will pay according to its contribution to peak net load and will accordingly be incentivized to reduce their contribution to peak net load volatility

The most difficult but also most important piece is the share of the cost borne by variable generators. STEC proposes that those generators be required to pay for firming power that is equal to the difference between the P10 forecast, which is the output the generators are forecasted to exceed 90% of the time, and the P50 forecast, which is the median forecast output, during peak net load periods. This requirement is consistent with TPPF's proposal for a firming requirement for variable generators[4] and with the second directive in Governor Abbott's July 6 letter to the PUC[5]. It is a relatively modest requirement compared to the 90% or greater availability rate that is expected of thermal generators, and TPPF believes it is an appropriate requirement to offset the reliability gap being created by subsidies for variable generation.

It would be wise for the PUC to study several methods of cost allocation to variable generators, using this proposal as a starting point, and TPPF again stresses that some level of cost allocation to these generators is a critical element of any new reliability or firming service. The fact that this element is lacking in the PUC's existing Phase II proposals is a critical deficiency in the current market reform process and necessitates including the STEC proposal among the Phase II options that will be studied by the engineering firm deployed by ERCOT and the PUC.

Reliability Standard

While TPPF is not endorsing a certain reliability standard at this point, TPPF believes that it is critical that the PUC define a quantifiable and transparent standard. In fact, it would be ideal for such a standard to be defined in statute, as the elected representatives of the people should be directing the commissioners as to how much money Texans want to spend to avoid outages, rather than asking the unelected commissioners to answer that question themselves. However, since the legislature chose only

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[3] SB 3, 87th Texas Legislature, 20 (2021), https://capitol.texas.gov/tlodocs/87R/billtext/pdf/SB00003F.pdf
[4] Texas Public Policy Foundation, "Comments to the Public Utility Commission of Texas, Project No. 52373," September 30, 2021, https://interchange.puc.texas.gov/Documents/52373_135_1156425.PDF.
[5] Greg Abbott, "Letter to the Commissioners of the Public Utility Commission of Texas," (Office of the Governor of Texas, July 6, 2021), https://gov.texas.gov/uploads/files/press/SCAN_20210706130409.pdf.

to direct the PUC to establish "requirements to meet the reliability needs of the power region" (see SB 3, Section 18[6]), without defining what those requirements should be, the PUC should follow that directive by establishing clear reliability requirements.

One element of STEC's proposal is the adoption of the 1-in-10-year loss of load event reliability standard[7]. TPPF is not endorsing the adoption of that standard or any other specific standard at this time. However, it strongly encourages the PUC to include in its RFP studying the impacts of standards that define fixed frequencies and durations of outages, such as the 1-in-10 standard, and more flexible standards, such as Loss of Load Hours. The reliability standard is a critical element of any long-term market reform, and the PUC should devote significant resources to assessing different standards and deciding on a quantifiable and transparent standard for the ERCOT market prior to engaging in any significant market redesign.

Sizing of the Reliability Service

Another reason that the PUC needs to establish an appropriate reliability standard is to facilitate the sizing of additional reliability services. The current absence of a reliability standard leaves a gap in the process of deciding how many extra resources should be procured. TPPF agrees with STEC that, should this proposal or a similar reliability service be adopted, a minimum reserve margin would need to be established to clearly define the sizing of the service[8]. Sizing is critical because the service must be large enough to ensure it provides market signal for more dispatchable generation but not so large that it supplants too much of the energy-only market. Some flexibility should be built into the determination of the reserve margin as the optimal margin depends on the resource mix and other factors, but the process for defining it should be as transparent and objective as possible in order to provide clarity and certainty for market participants.

STEC's proposal eliminates some ambiguity by centering the reserve margin not around peak load but around peak *net* load, which targets the periods of highest stress on the system and reduces the impact of the high variance of wind and solar generation during peak hours. Focusing on hours of peak net load is also consistent with the clear directive in SB 3 Section 18 to size reliability services to "prevent prolonged rotating outages due to net load variability in high demand and low supply scenarios."[9] TPPF is not ready to endorse any specific method for determining a minimum reserve margin, but it strongly endorses using peak net load as the foundation for the reserve margin.

The other key element of sizing the service is defining the duration of it. As noted in SB 3 Section 18, resources providing reliability services should be "dispatchable and able to meet continuous operating requirements for the season in which the service is procured."[10] In a practical sense, this statutory requirement limits the qualifying resources for providing the service to thermal generators, and the

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[6] SB 3, 87th Texas Legislature, 30 (2021), https://capitol.texas.gov/tlodocs/87R/billtext/pdf/SB00003F.pdf.
[7] STEC, "Reliability Service Proposal," p. 5.
[8] STEC, "Reliability Service Proposal," p. 5.
[9] SB 3, 87th Texas Legislature, 31 (2021), https://capitol.texas.gov/tlodocs/87R/billtext/pdf/SB00003F.pdf
[10] Ibid

STEC proposal is correct in noting that. Perhaps some long-duration (multi-day or seasonal) energy storage will be able to meet these requirements in the future, but that is not the case today. Ideally, the Commission will consider several different duration requirements (number of continuous hours of operation etc.) and find an appropriate cost/benefit balance that is resource agnostic but also consistent with the SB 3 statute.

The Need for Capacity Requirements in a Market with Subsidized Variable Generation

The ERCOT energy only market has been enormously successful at keeping electricity prices low for Texas ratepayers and at fostering more efficiency and flexibility than existing capacity-based markets. However, the explosion of subsidized variable generation that is not responsive to prices and demand signals has fatally damaged the ability of the market to ensure resource adequacy through prices alone. As noted often by ERCOT's independent market monitor,[11] artificially low wholesale prices and extreme price volatility, caused by subsidized variable generation whose output is not well-correlated with demand, have made it virtually impossible to increase or even maintain the existing quantity of dispatchable generation in the ERCOT market, which is necessary to ensure resource adequacy as electricity demand in the region grows. The PUC's prior attempts to incentivize more reliable generation to enter the market by increasing scarcity prices[12] may have prevented some early retirements of dispatchable generation, but the primary outcome has been more new variable generation. Something else is needed.

TPPF has been sounding this alarm for many years and took the initiative, well before Winter Storm Uri, to study a requirement that wind and solar provide a certain amount of firm capacity during peak demand hours.[13] This approach is consistent with existing ancillary services, such as the non-spinning reserve service, which are also capacity mechanisms that overlay the energy-only market. Our position is not that the energy-only market needs to be supplanted, but that the imbalances in the market caused by subsidized variable generation are creating a need for additional capacity requirements that properly value dispatchable generation and ensure the level of reliability that ratepayers demand. If those subsidies are reduced or disappear, then the size of this service can be reduced accordingly.

In effect, STEC's reliability service would amount to a seasonally targeted and, if appropriately sized, efficient approach to better valuing reliable generation within the ERCOT energy-only market. The key is to size the requirements correctly, target them to the times when resource adequacy is most lacking, and adjust the requirements up or down as market imbalances change. TPPF believes STEC's proposal, if implemented correctly, could accomplish those goals.

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[11] Potomac Economics, "2020 State of the Market Report for the ERCOT Electricity Markets," May 2021, 72, 73, https://www.potomaceconomics.com/wp-content/uploads/2021/06/2020-ERCOT-State-of-the-Market-Report.pdf.

[12] Potomac Economics, "2020 State of the Market Report," 82.

[13] Brent Bennett, *Improving the Reliability of the ERCOT Grid Through a Firming Requirement for Wind and Solar Generation*, (Texas Public Policy Foundation, October 2021), https://www.texaspolicy.com/improving-the-ercot-grid-through-a-reliability-requirement-for-variable-generation/.

In addition, we believe it is necessary to prevent the level of regulatory intervention that has been implemented since Winter Storm Uri and that will need to be implemented more as market volatility increases and the gaps between peak demand and dispatchable generation grow. STEC's proposal may not be a perfect solution, but it is far better than allowing the system to devolve further into more command-and-control operations. It also represents a more targeted, less expensive, and more effective solution to the resource adequacy problem than the load-serving entity obligation that is embodied in the PUC's Phase II blueprint.

Conclusion

TPPF has consistently held throughout the market reform debate over the past year that the Phase I reforms to manage short-term variability and ensure firm fuel supplies are important, but not sufficient, to fix the existing reliability problems in the ERCOT market. More is needed to ensure resource adequacy in the face of increasing variable generation on the system and declining dispatchable generation. Also, the most important factor in any proposal to improve resource adequacy is the cost allocation of firming to generators, especially to the wind and solar generators that are increasing the volatility of the ERCOT market. The PUC's existing Phase II proposals do not include any study of cost allocation to generators, which is a critical deficiency that must be corrected.

To address these issues, TPPF developed a proposal to require wind and solar generators to provide a certain amount of firm generation, which was expounded upon in our comments during the work sessions[14] and a related publication.[15] STEC's proposal represents a broader firming requirement than our proposal in that it applies to all market participants. However, if the service is sized appropriately, with the elegant solution to cost allocation presented in the proposal, it could provide a solution to the reliability problems Texas is facing at a much lower cost than the existing Phase II proposals. The PUC should add this proposal to their RFP and seriously consider it in addition to their existing proposals.

Sincerely,

/s/ Jason Isaac
Hon. Jason Isaac
Director, Life:Powered
Texas Public Policy Foundation

/s/ Brent Bennett
Dr. Brent Bennett
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Texas Public Policy Foundation

[14] TPPF, "Comments to the Public Utility Commission of Texas."
[15] Bennett, *Improving the Reliability of the ERCOT Grid*.